

PA AND OTHER SITES IN THE PARUA BAY DISTRICT, WHANGAROA, NORTHLAND

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Abstract. The settlement pattern in Parua Bay is discussed in relation to the topography and economic resources of the area. A regional type of fortification is defined and a method of estimating the population is suggested.

The fieldwork in Parua Bay was undertaken at the invitation of Mr Douglas Myers in order that the archaeological sites on his property were recognised and conserved. The area, known as Matauri Bay Farms Ltd., is shown in Figs. 1, 2. Eighteen sites were recorded (Fig. 2), consisting of six pa, seven open settlements with terraces, two pit groups and three areas of cultivation; there were also five terrace sites that were doubtful, bringing the total up to 23. Particulars of all these sites were given in a report to Mr Myers, which is available at the Auckland Museum Library and in the Anthropology Department of the University. The site numbers used in this article refer to the New Zealand Archaeological Association's site recording scheme.

The method of survey was to visit and plan the known pa which were either marked on the NZMS 1 map or else conspicuous in the landscape. The plans (Figs. 5-10) were done with a prismatic compass and pacing, and obviously contain minor inaccuracies. The intervening ridges and spurs were then walked looking for pits and other features and the land behind the beaches was carefully investigated; some bush-covered areas were omitted.

THE SETTING

The Matauri Bay property is situated on the rugged coastal tract, which extends from Whangaroa Harbour to the north-western head of the Bay of Islands; it faces the Cavalli Islands, four kilometres offshore to the north-east. It comprises the greater part of a peninsula, 2.5 km long to its northern extremity at Opounui Point, which lies between the open sandy Matauri Bay on the east to Whau Bay on the west (Fig. 1). The property boundaries however, follow the crests of the ridges and exclude the slopes to the Whau stream and to Matauri Bay (Fig. 2); the total area is approximately 343.98 hectares (850 acres).

The peninsula is of bold relief (Figs. 3, 4), comprising two main ridges 100-130 m high flanking the Parua stream, from which numerous lateral spurs diverge divided by short streams flowing to either coast. The chief of these are the Whau, Waimiti and Opounui streams which issue in small bays on the north-west coast. The Parua stream flows north to a stony bay, the principal inlet on the north-east coast.

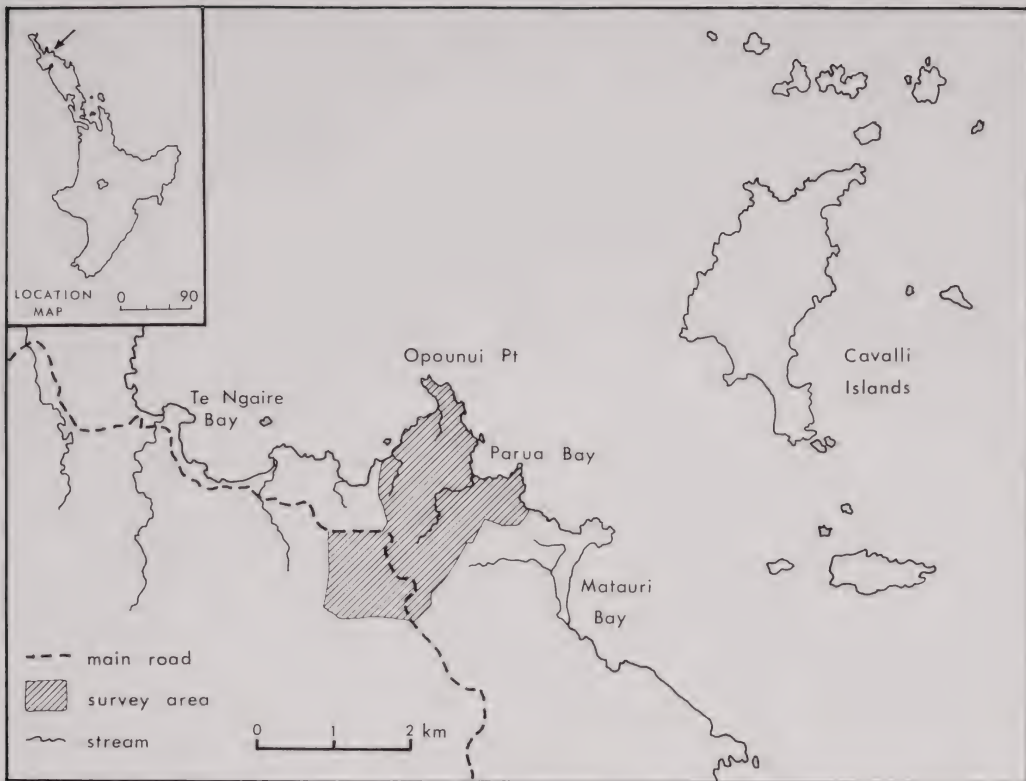


Fig. 1. Location maps, Parua Bay district.

Geologically, this is an ancient landscape; the underlying rocks are greywackes of the Waipapa series, a complex of folded marine sedimentary rocks formed in the late Paleozoic and early Mesozoic area (Ministry of Works N.Z. 1964, p.11 & Map 1). These are exposed dramatically in the sheer cliffs which ring the peninsula; the formation has weathered superficially to a soft sandstone "varying from a greyish orange to a reddish orange colour with cores of white very altered sandstone" (P. Moore pers. comm.). This in turn has broken down to a strongly leached yellow-brown earth of low natural nutrient status which varies from 0.5 to 1 m deep, or more when soil has accumulated as hill-wash on the lower slopes and in the valleys. The whole area will have been originally wooded with a mixed podocarp forest including kauri (Ministry of Works N.Z. 1964, p. 26), whereas today there are only patches of manuka scrub. Lemonwood trees (*Pittosporum eugenoides*) must have grown on Puketarata from which the pa (N8/10) was named.

From the point of view of the prehistoric Maori settlers, the area offered several advantages. It was within easy reach of good fishing grounds in relatively sheltered waters, and with a series of small bays where the canoes could be safely beached; there were a variety of shell-fish available in the sandy Matauri Bay and on the rocky coasts, as well as in the more distant Whangaroa Harbour; the climate and soils were suitable for cultivation of kumara (sweet potato) on the lower slopes when cleared of bush, and for taro on the flats by the streams. The

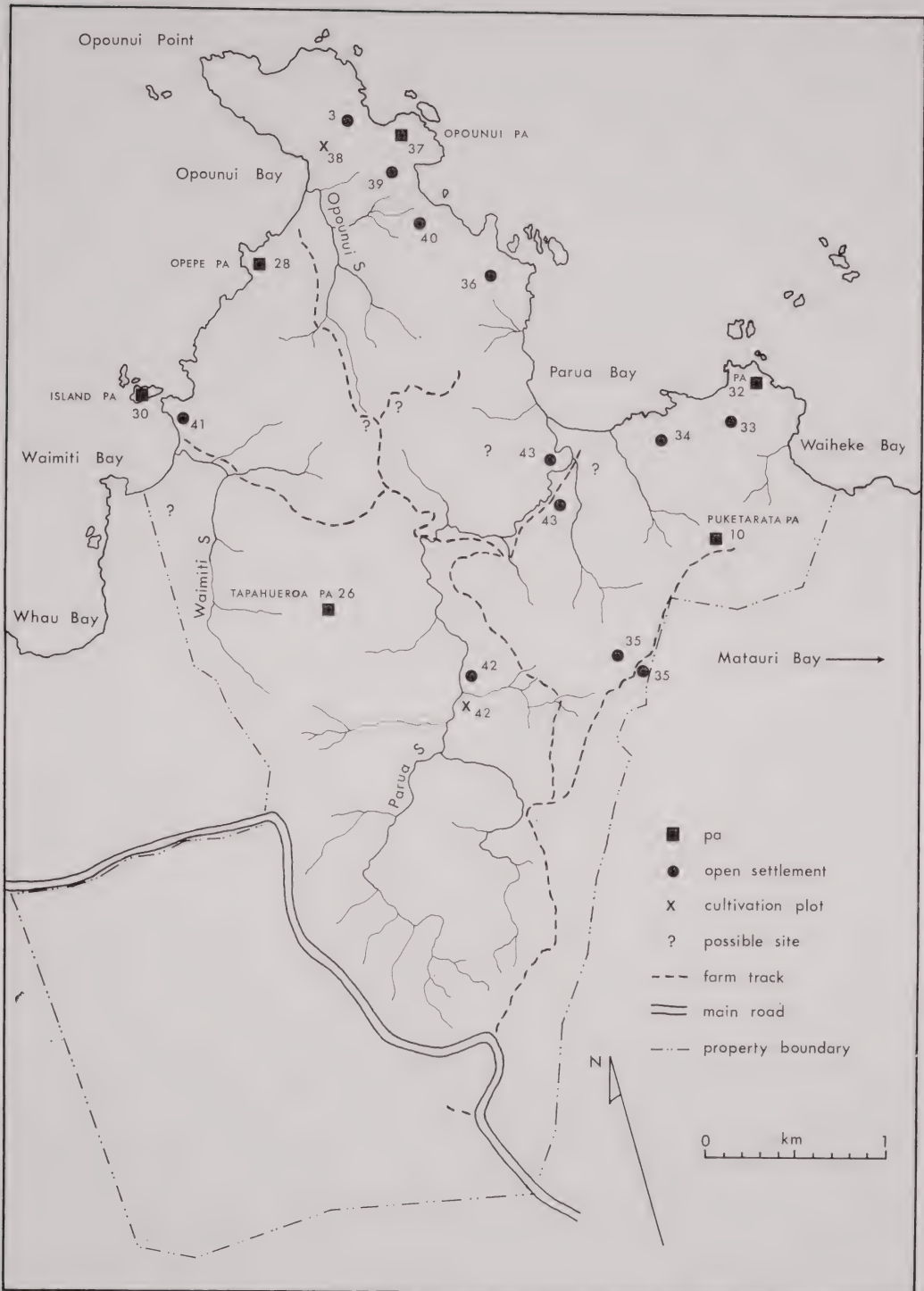


Fig. 2. The prehistoric settlement pattern in Parua Bay.



Fig. 3 Parua Bay, left, with Puketarata pa on the central summit: the Cavalli Islands behind. (Photo: A. Fox).



Fig. 4. Looking NE from Tapahueroa pa, towards Opounui pa. (Photo: A. Fox).

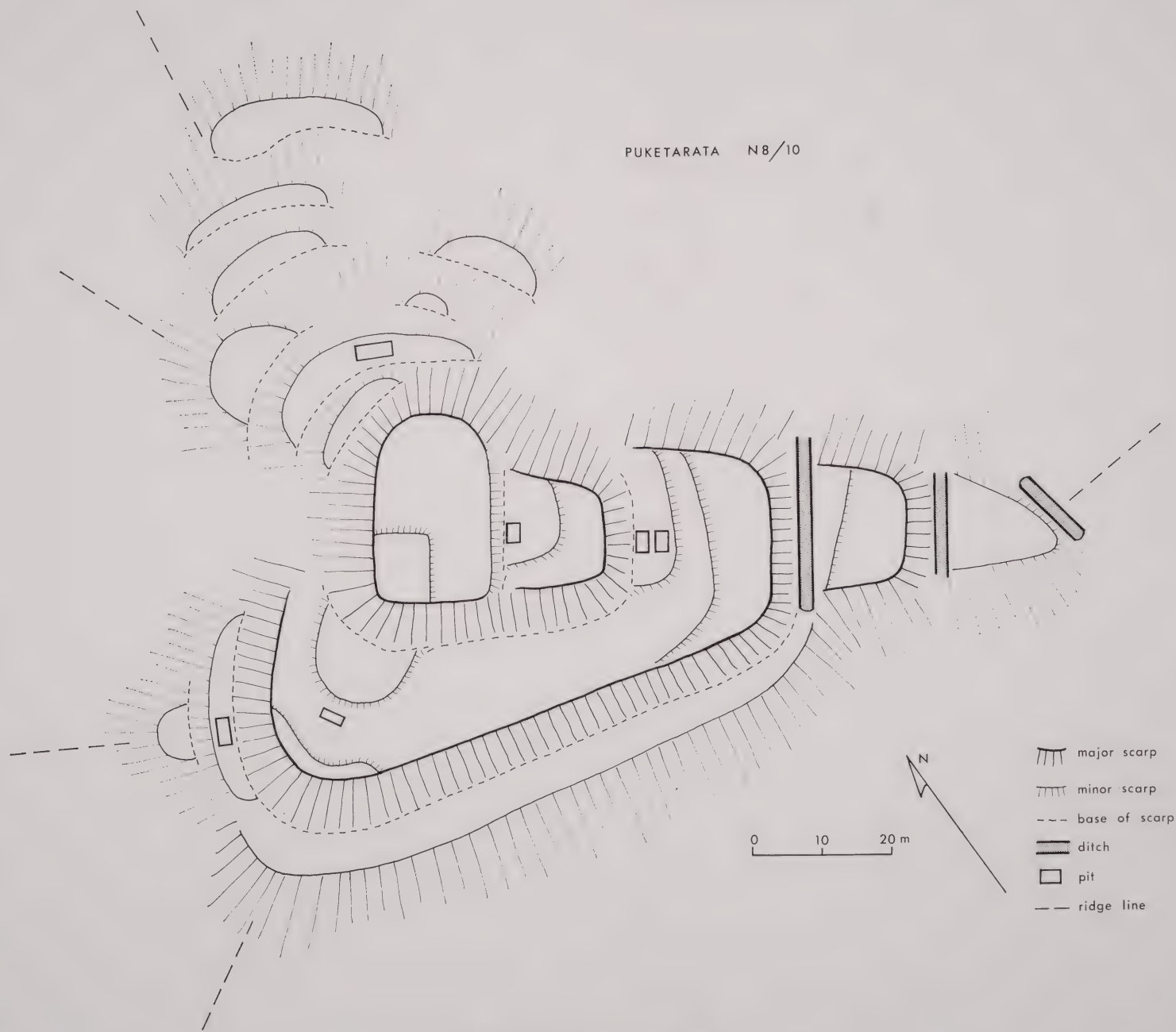


Fig. 5. Plan of Puketarata pa, N8/10.



relief offered a series of ready-made strong points for defence in case of attack. There is little wonder that the peninsula, now practically deserted except for holiday-makers, shows signs of formerly being densely settled.

THE SETTLEMENT PATTERN (Fig. 2)

The pa dominate the settlement pattern, the visible remains of terraced open settlements or pits or cultivation being small and slight. Puketarata pa (N8/10) (Figs. 3, 5) situated at a nodal point 91.5 m up on the ridge between Matauri Bay and the Parua stream is the largest, with the most sophisticated layout, and presumably the principal settlement in the district. Its defences, a series of three transverse ditches and scarps, were designed to bar an approach up the relatively easy slopes from Matauri Bay whilst the approach along the ridge from the south was flanked by two major scarps which almost certainly carried palisades. The pa could also be seen from Parua Bay from which it could be reached after a steep climb up either of two spurs; these were blocked at their summit by defensive crescentic terraces situated outside and below the main enclosure of the pa (Fig. 5). The pa interior is terraced and sub-divided by low scarps indicative of family living places, and culminates in a prominent rectangular summit platform or *tihī*. There are only seven small storage pits, implying that kumara cultivation was minimal, which is borne out by the few small-scale open sites in the surrounding area (N8/33-36) (Fig. 2). The inhabitants must have relied on fish supplemented by fern root for their main food supplies; the control of the beaches at Matauri and Parua Bay for fishing bases and canoes will have been essential to their economy.

The other pa (N8/32) in this area is of a different kind (Fig. 6). The precipitous headland north of Waiheke Bay was fortified by five close-set ditches with four intervening banks, defending only a small scarped area on the cliff top. The inner ditch continues down the southern slope towards a nameless little stony beach; there are four or five terraces on the slopes outside the defences and it is probable that the pa was constructed as a look-out and a refuge for small settlements (N8/33, 34) on the hill sides around the bay (Fig. 2). The use of banks and of multiple lines of close-set defences indicate a different tradition of fortification and suggest that this was the work of an intrusive group. Banks are a feature of the defences of some late Ngapuhi pa in the Bay of Islands, such as Kororipo at Kerikeri.

The block of land north and west of the Parua stream is dominated by the Tapahueroa pa (N8/26) (Fig. 7) on the highest point at 148 m. The defences, consisting of two magnificent scarps and a small transverse ditch with external bank, are aligned across the ridge in order to bar an approach from any landing in Whau Bay, which is not visible from the hill top. The interior of the pa is small, essentially a 20 x 16 m summit platform (*tihī*) divided in half by a low scarp, with crescentic terraces defending two subsidiary spurs; there is a block of twelve terraced store pits down the northern ridge. In essence this pa is a strongpoint defending a food store, and probably was a chief's seat. From the position of the store pits, it can be deduced that the crops were grown on the north facing slopes towards Waimiti Bay, though no traces of garden plots could be detected. At Waimiti Bay there are indications of a terraced settlement (N8/41) behind the

PA N8/32

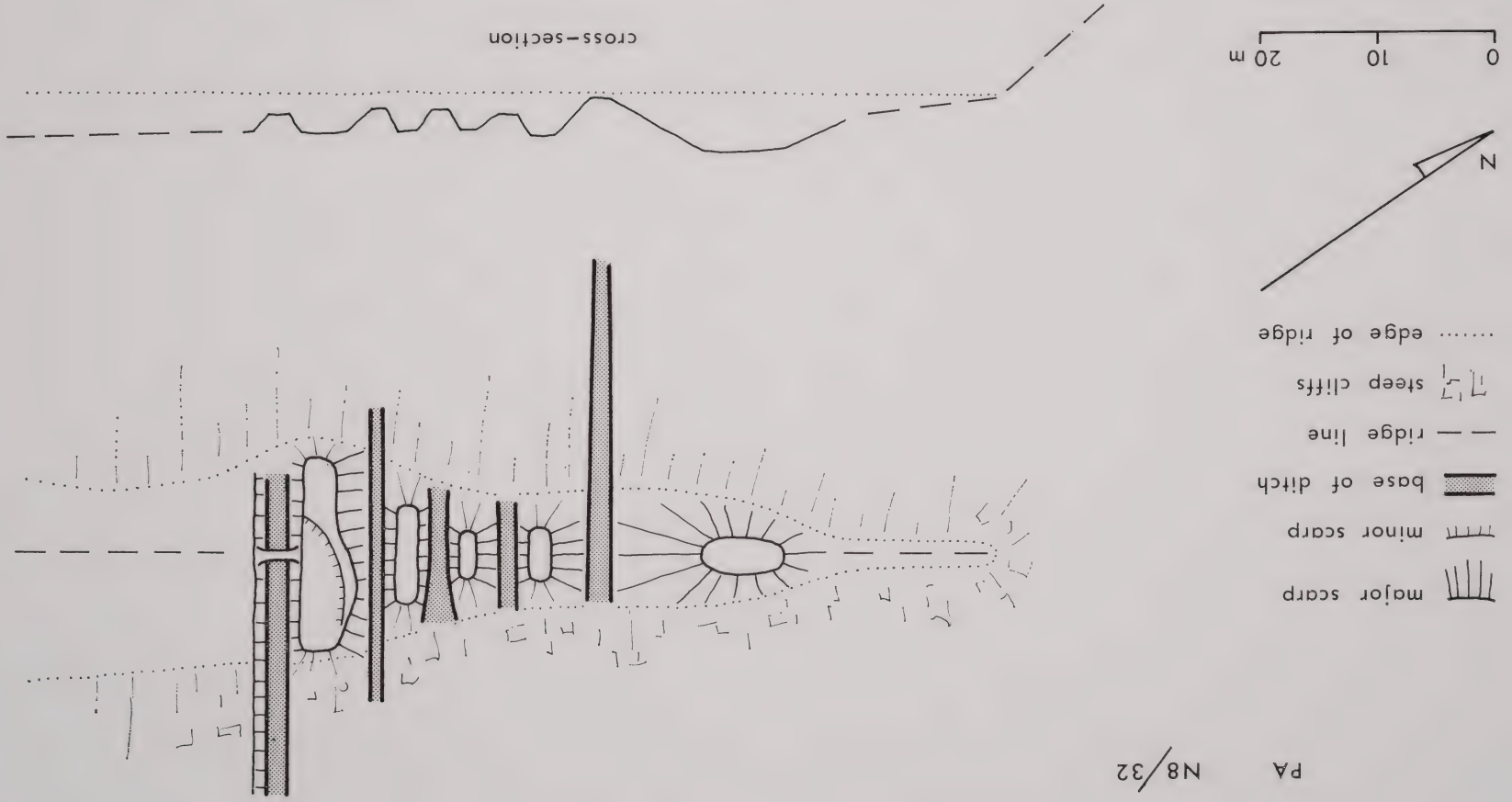


Fig. 6. Plan of headland pa, N8/32, north of Waikake Bay.

TAPAHUEROA PA N8/26

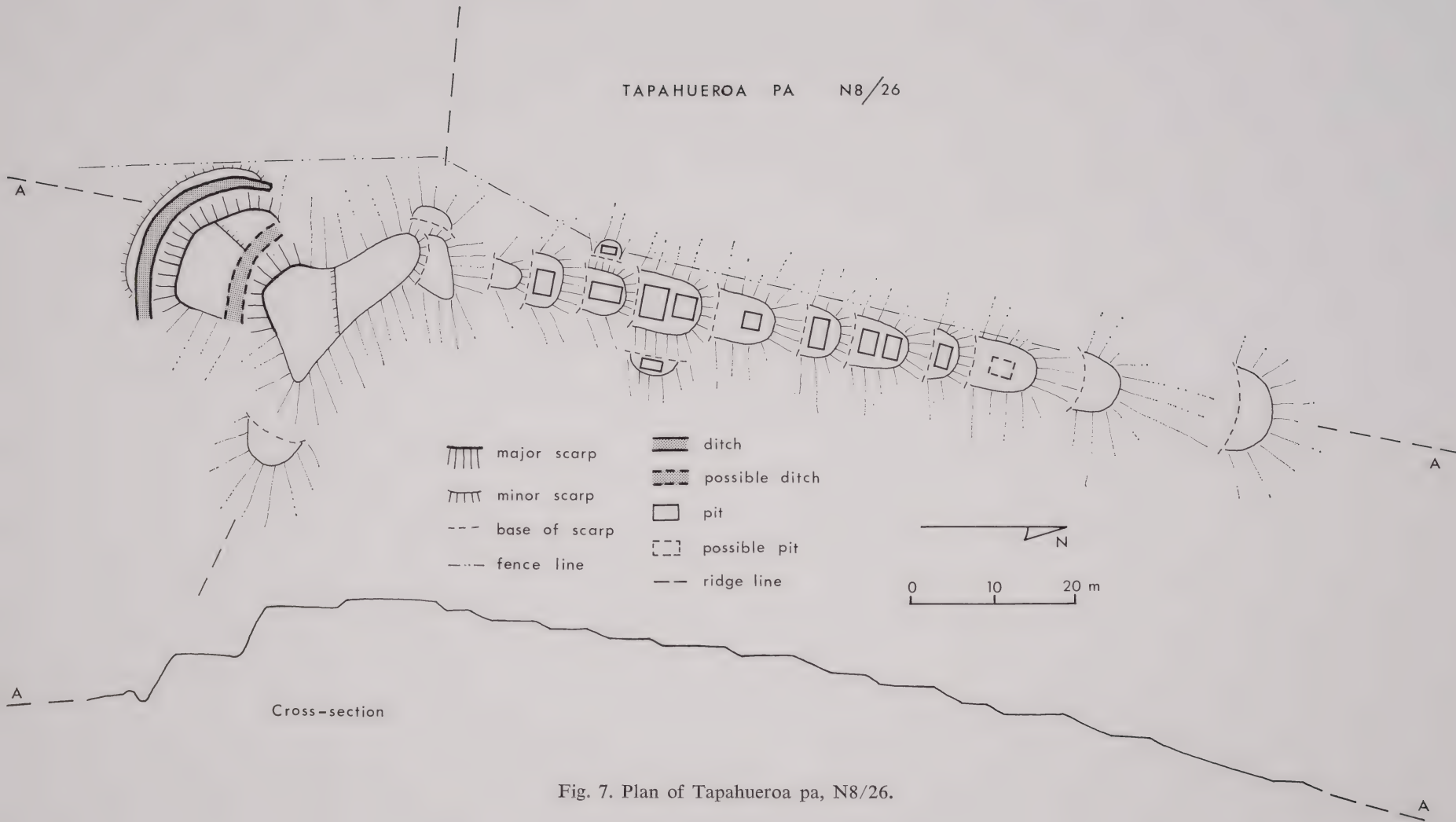


Fig. 7. Plan of Tapahueroa pa, N8/26.

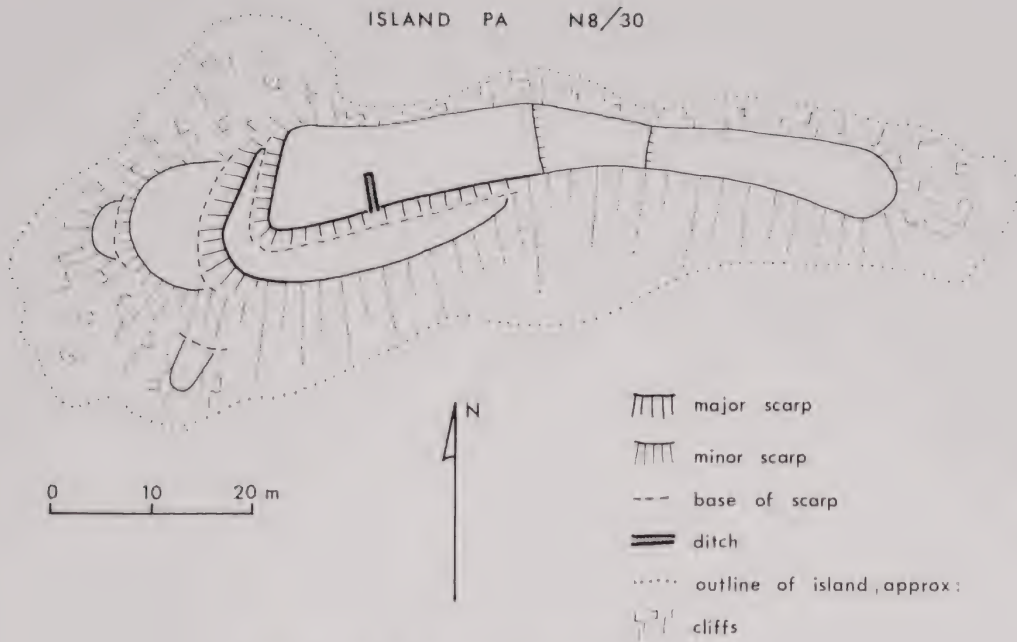


Fig. 8. Plan of island pa, N8/30, Waimiti Bay.

foreshore and also a small fortified settlement (N8/30) (Fig. 8) on the rocky island off the northern point. This island, which is accessible by a scramble at low tide, is naturally defended by cliffs on the north and east sides and by artificial terraced scarps on the south and west. A cooking area is apparent on the terrace at the west end. There is a short length of transverse ditch on the summit, probably incomplete. The island probably was a lookout as well as a fishing base for the people who built Tapahueroa pa, which dominates the skyline from the shore. Fishing from the rocks at the base of the island is still good today and the bay is also visited by the Maori fishermen for "sea eggs" (*Evechinus chloroticus*).

The third major fortification is Opounui pa (N8/37), situated on a bold headland on the north side of the peninsula (Figs. 4, 9). In design it resembles Puketarata and Tapahueroa in defending the only line of easy approach by a ditch with external bank and internal scarp. Terraced living areas on the summit also have defensive scarps, no doubt supplemented by palisades; the *tahi* is divided by a minor scarp and there are no obvious pits. This is the only pa that shows signs of alteration in the defences; the main ditch on the west side ends about 2 m short of the cliff edge, indicating an original entrance. A second smaller ditch has been dug to cover this gap 20 m farther west, continuing to the cliff edge, and ending 20 m down the slope on a pre-existing terrace (Fig. 9). It is clearly visible on air photographs. The present entrance to the pa is by a causeway across the main ditch 10 m from its western end and by a diagonal track up the scarps.

There are indications of several small terraced settlements with pits (N8/39, 40) and of terraced cultivation plots (N8/38) on the adjoining spurs and in the valley leading down to Opounui Bay, as well as a group of pits on the cliff top (N8/3, marked on the NZMS 1 map as Opipi pa). These take advantage of the comparative shelter of the north-westerly slopes and of easy access to the beach.

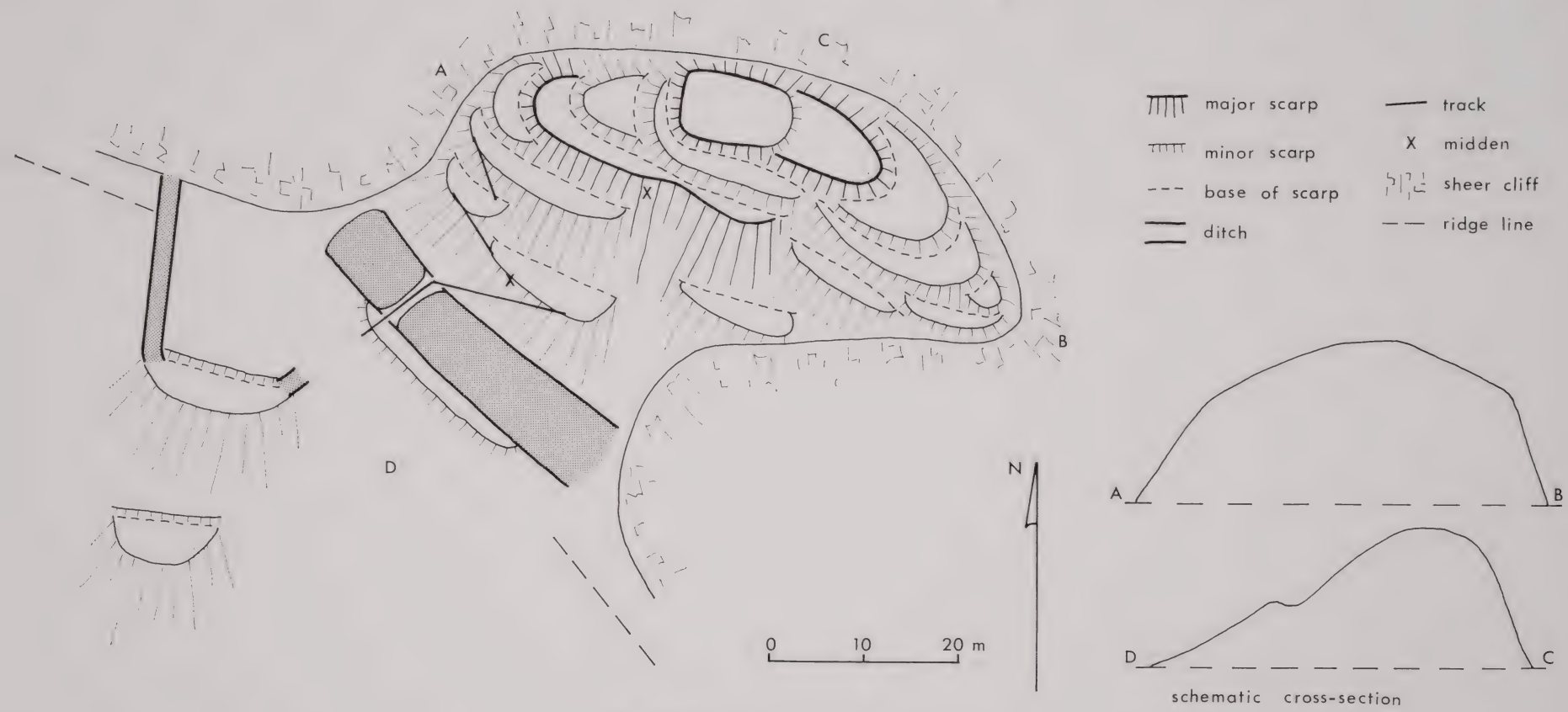


Fig. 9. Plan of Opounui pa, N8/37.

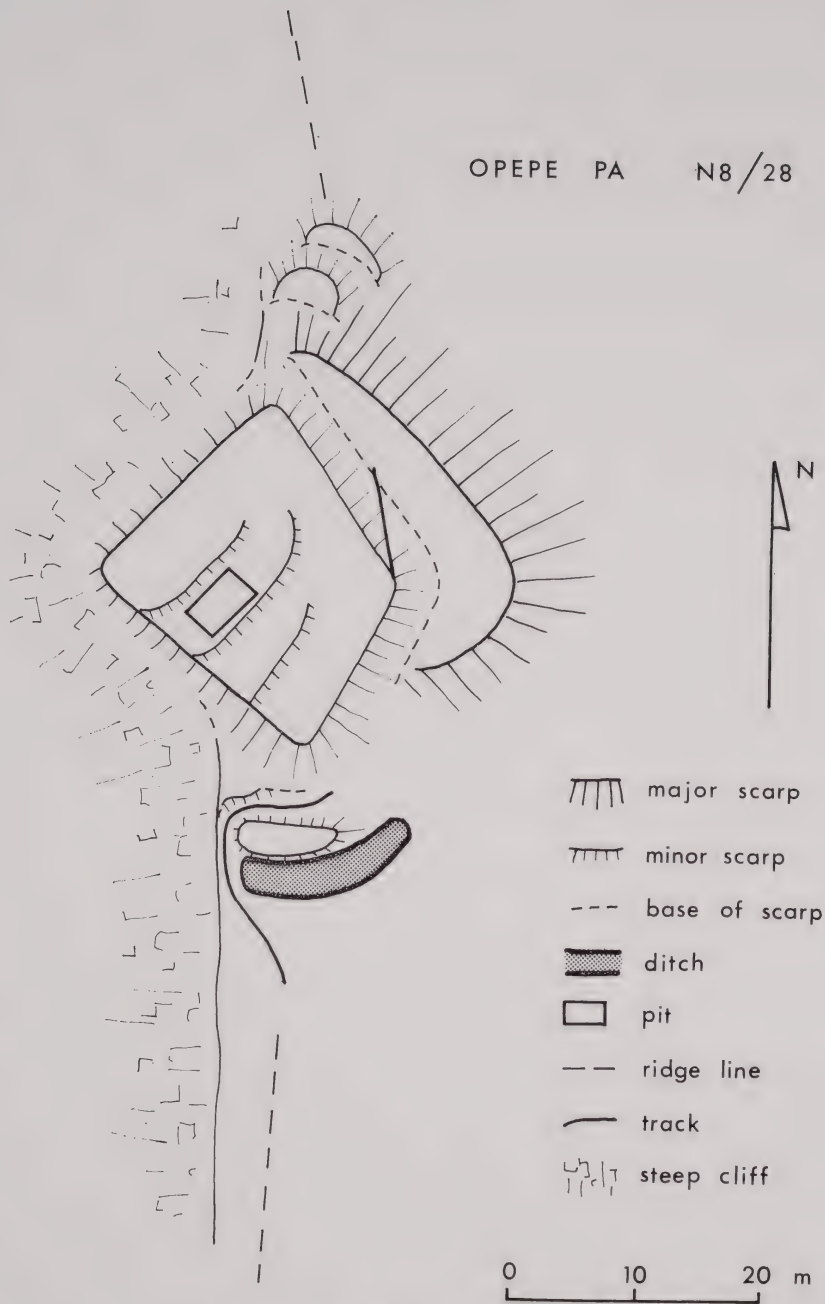


Fig. 10. Plan of Opepe pa, N8/28.

Opounui Bay was also available to the inhabitants of Opepe pa (N8/28) on cliffs at Marawhiti Point (Fig. 10). This is a smaller pa, with a square topped terraced summit platform with one large storage pit. The level approach from the south along the cliff tops is barred by a short length of ditch and an internal bank which is partly an eroded sandstone outcrop. The entrance resembles that at

Opounui, with the ditch stopping 1.5 m short of the sheer cliff and a worn rock-cut path round the end of the outcrop; this leads to a lower terrace and then diagonally up the intervening scarp to the summit platform. The absence of earth-work defence on the northern and western slopes to the beach suggests that the inhabitants had no fear of attack from the direction of Opounui. It may be deduced from this and from the constructional similarities that the two pa belonged to related groups, who shared the resources of the bay and the adjacent territory.

POPULATION AND THE ECONOMY

It is always difficult to know whether a concentration of settlements in a small area, such as is manifest at the Parua district, is broadly contemporary, and reflects a rapidly increasing population, or whether it represents a succession, built by a small group shifting about in the landscape over a long period of time. Such problems can only be decided after a prolonged campaign of excavation and perhaps not even then, in the absence of distinctive dateable artifacts. Some evidence in favour of contemporaneity has been produced from the field survey, in which it has been shown that five out of the six pa use similar methods of fortification. Each relies on major artificial scarps, almost certainly carrying palisades, and supplemented by short transverse ditches, sometimes with a low external bank, constructed solely on the easiest line of approach. The sites were selected with this concept in mind and were skilfully engineered to use the topography to its best advantage. Other details significant of a regional style are the design of the entrances at Opepe and Opounui which forced attackers to file round a ditch-end towards the cliff edge, and the small-scale division on the summit platform (*tihī*) seen at Puketarata (Fig. 5), Opounui (Fig. 9) and Tapahueroa (Fig. 7), which must be of some social significance. Only the headland pa at Waiheke Bay (Fig. 6) which was defended by a series of four close-set banks and ditches is built in a different style, suggesting an intrusive group.

A recent field survey by R. Cassels and J. Stevens for the New Zealand Historic Places Trust has shown that fortifications in the Parua style continue along the coastal tract to the north-west as far as Wainui Bay and occur also in the Tauranga valley, inland from the Whangaroa harbour; in these areas there is a dearth of pits and middens. Between Wainui and Tauranga the types of pa are more varied and include a few with lateral ditches and the pit groups are larger and more numerous (R. Cassels pers. comm.).

The distribution of the six pa in the Parua district (Fig. 2) is not unreasonable when it is considered in relation to the available food resources. It is apparent that each pa dominates and is accessible from a bay; Puketarata from Matauri or Parua Bays, Tapahueroa and the subsidiary island pa from Waimiti Bay, whilst Opounui and Opepe share access to Opounui Bay. The absence of large shell middens in the pa or near the coast imply that shellfish were not the major item in the diet and consequently protein is likely to have been obtained from fish. Sea fishing from canoes launched and landed at the bays will then have been of considerable economic importance; much of the catch would have been preserved by drying. Judging by Lesson's account (Sharp 1971, p. 58), of the nearby Bay of Islands, "Fishing expeditions are so pleasant and the fish so abundant that the natives give away enormous quantities for trifles", there would have been enough for all. It is also relevant that Captain Cook named the nearby Cavalli Islands from the trevalli fish sold to him there by the Maoris (Beaglehole 1955, p.213).

The relatively few kumara storage pits recorded in the pa and open settlements, 35 in all, (Tables 1, 2) implies that the amount of cultivation was limited, though suitable slopes were available. The substitute was fern root which K. Shawcross has shown was the staple diet in the North (Shawcross 1967, p. 330). J. L. Nicholas who landed with Samuel Marsden on this coast in December 1814, commented, (1817, 1 p. 142), "The fern is an invaluable production to these people who subsist in a great measure on the roots of it, from which they prepare a sort of bread. As it grows here in the greatest abundance, they may be always sure of an inexhaustible supply". With an economy based on fish and fern root, the Parua and neighbouring districts could have supported a growing population for a considerable period of time.

With these considerations in mind, a rough estimate of the maximum number of people, excluding children, has been obtained by counting the probable living terraces within the pa and in the open settlements (Tables 1, 2). There is, of course, the difficulty in deciding which terraces were purely defensive or how many were purely for storage and should be excluded, or how many houses were built on each of the larger terraces; in estimating, it has been assumed that these factors will tend to cancel each other out. Each terrace has been equated with an extended family group, with one dwelling holding six adults. This number is based

Table 1. Estimated adult population at pa sites.

Number	Name	Terraces	Summit (tahi)	Pits	People
N8/10	Puketarata	15*	1	5	98
26	Tapahueroa	6	1	12	44
28	Opepe	4*	1	1	32
30	Island pa	6	—	—	36
32	Headland pa	1	1	—	14
37	Opounui	12	1	—	80
Totals:	6 pa	44	5	18	304

*Two small defensive terraces have been excluded.

Table 2. Estimated adult population at open settlements.

Number	Terraces	Pits	People
N8/3	—	4	12
33	4	—	12
34	—	3	9
35	3	—	9
36	6	—	18
38	4	1	12
39	4	6	12
40	7	—	21
41	4	2	12
42	5	—	15
43	4	1	12
Totals: 11 settlements	41	17	144

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Please contact Auckland Museum for more information.

Fig. 11. "A Hippiah in New Zealand, Queen Charlotte Sound" by John Webber, 1771, showing a family group of six people on a house terrace.

on observation by Cook's artist, John Webber, as illustrated by his drawing of 1771, "A Hippiah in New Zealand, Queen Charlotte Sound" (Fig. 11) which shows a family group on a terrace in front of a house. It is also the number mentioned by Cook's surgeon, W. B. Monkhouse, in his Journal as inhabiting a single house at Tegadu (Anaru) Bay, "Here was a man, his wife, two sons, an old woman and a younger who acted as servants" (Beaglehole 1955, p. 584).

The chief might be expected to have a larger household; Augustus Earle (Murray-Oliver 1968, Pl. 26) drew a retinue of twenty people surrounding the dying Paramount chief Hongi, including his two wives. For a lesser man, eight adults seems a reasonable figure to be housed on the summit platform or *tihī* and has been employed in the estimate. In the open settlements, living quarters would be less congested and only half the terraces are likely to have been used for housing, and the others for storage and the practice of crafts and manufactures; consequently, an average of three people per terrace has been adopted in the calculations. This is compatible with J. L. Nicholas' description in 1814 (1817, 1 p. 258) of "a family living entirely by themselves, remote from any village and in a perfect state of seclusion". It consisted of "a man with his head wife, two subordinate ones and three or four very fine children". Excavations near Aotea Harbour by Richard Cassels revealed one house structure in a group of three terraces (pers. comm.), whilst on Mototapu Island Anne Leahy found a house associated with two terraces and two storage pits (Leahy 1972, p. 24).

It is admitted that these calculations are rough and ready and applicable only to areas where the pa interiors are terraced. Obviously the yardstick could